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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,055	03/30/2004	Reinhard H.H. Poetzsch	11884/415801	1300
23838	7590	09/21/2007	EXAMINER	
KENYON & KENYON LLP			LOFTUS, ANN E	
1500 K STREET N.W.				
SUITE 700			ART UNIT	
WASHINGTON, DC 20005			PAPER NUMBER	
			3694	
			MAIL DATE	
			DELIVERY MODE	
			09/21/2007	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/812,055

Applicant(s)

POETZSCH, REINHARD H.H.

Examiner

Ann Loftus

Art Unit

3694

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date \_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: See Continuation Sheet.

**37 CFR § 1.105 - Requirement for Information  
Form Paragraphs**

1. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.
2. The information is required to extend the domain of search for prior art. Limited amounts of art related to the claimed subject matter are available within the Office, and are generally found in class 705 and subclasses 35, 36 and 37, which describe financial investment instruments. A broader range of art to search is necessary to establish the level of knowledge of those of ordinary skill in the claimed subject matter art of calculating net present value of an Average Spot Basket Option.
3. Is the method for moments of the sum of spot values of underlyings (as in claim 1) created by the applicant, or is it derived from an existing approach? Are the calculations based on existing equations or is the inventor claiming the concept and derivation of the claimed method?
4. The fee and certification requirements of 37 C.F.R. § 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 C.F.R. § 1.105 that are included in the applicant's first complete communication responding to this

requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 C.F.R. § 1.105 are subject to the fee and certification requirements of 37 C.F.R. § 1.97.

5. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.
6. This requirement is an attachment of the enclosed Office action. A complete response to the enclosed Office action must include a complete response to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action, which is 3 months.
7. In response to this requirement, please provide the citation and copy of each publication that is a source used for the description of the prior art in the disclosure pertaining to the calculation of net present value for average spot basket options. For each publication, please provide a concise explanation of that publication's contribution to the description of the prior art.

8. In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to develop the disclosed subject matter that describes the applicant's invention, particularly as to developing the calculations for the net present value of an average spot basket option. For each publication, please provide a concise explanation of the reliance placed on that publication in the development of the disclosed subject matter.
9. In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to draft the claimed subject matter. For each publication, please provide a concise explanation of the reliance placed on that publication in distinguishing the claimed subject matter from the prior art.
10. In response to this requirement, please provide a copy of all the math and derivations used to calculate the net present value of an average spot basket option. For each equation please include a description of all the variables. And if the variables needed calculations to achieve their value, please include those derivations.
11. In response to this requirement, please state the specific improvements of the claimed subject matter over the disclosed prior art and indicate the specific elements in the claimed subject matter that provide those improvements. For those claims

expressed as means or steps plus function, please provide the specific page and line numbers within the disclosure, which describe the claimed structure and acts.

12. In response to this requirement, please state whether any search of prior art was performed. If a search was performed, please state the citation for each prior art collection searched. If any art retrieved from the search was considered relevant to demonstrating the knowledge of a person having ordinary skill in the art to the net present value of an average spot basket option calculation, please provide the citation for each piece of art considered and a copy of the art.

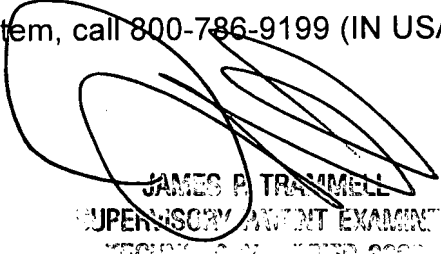
13. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Loftus whose telephone number is 571-272-7342. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JAMES P. TRAMMELL  
SUPERVISOR/ART UNIT EXAMINER  
TECHNICAL CENTER

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9/13/07

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings contain hand-lettered labels of uneven weight. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-13 are rejected under 35 U.S.C. 101 because a claim may not preempt every substantial practical application of an abstract idea. The MPEP (2106 IV C 3) cites this concern for applications of a mathematical nature:

Even when a claim applies a mathematical formula, for example, as part of a seemingly patentable process, USPTO personnel must ensure that it does not in reality "seek patent protection for that formula in the abstract." Diehr, 450 U.S. at 191, 209 USPQ at 10. "Phenomena of nature, though just discovered, mental processes, abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." Benson, 409 U.S. at 67, 175 USPQ at 675. One may not patent a process that comprises every "substantial practical application" of an abstract idea, because such a patent "in practical effect would be a patent on the [abstract idea] itself." Benson, 409 U.S. at 71-72, 175 USPQ at 676; cf. Diehr, 450 U.S. at 187, 209 USPQ at 8 (stressing that the patent applicants in that case did "not seek to pre-empt the use of [an] equation,"



Continuation of Attachment(s) 6). Other: 105 Requirement for Information.

but instead sought only to “foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process”).

“To hold otherwise would allow a competent draftsman to evade the recognized limitations on the type of subject matter eligible for patent protection.” Diehr, 450 U.S. at 192, 209 USPQ at 10. Thus, a claim that recites a computer that solely calculates a mathematical formula (see Benson) or a computer disk that solely stores a mathematical formula is not directed to the type of subject matter eligible for patent protection.

Thus, the methods would not be patentable subject matter even if the method had a useful, concrete, and tangible result, because patent protection that keeps others from using mathematical techniques is improper.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over “The Performance of Analytical Approximations for the Computation of Asian Quanto-Basket Option Prices” written by Datey, Gauthier, and Simonata in 2003, in view of Asian basket spreads and other Exotic Averaging Options, written by Castellacci and Siclari in 2003.

As to claims 1-13, Datey teaches calculating moments and the lognormal distribution on pages 67-68. Castellacci teaches using a Black Scholes formula with a lognormal model under the section Generalising the Lognormal Model. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Datey to teach claims 1-13 in order to determine a net present value of an average spot basket option.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent Application 20020120542 by Higgins, and

US Patent 6173276 by Kant et al., and

US Patent 6546375 by Pang et al., and

US Patent application 20020178101 by Swift, and

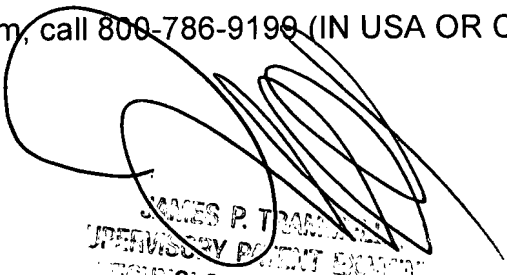
US Patent Application 20030208430 by Gershon, and

US Patent Application 20030014337 by Matthews.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Loftus whose telephone number is 571-272-7342. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JAMES P. TRAMMELL  
SUPERVISOR, PATENT EXAMINER  
TECHNOLOGY CENTER 3694

AL  
9/13/07